

ANNOUNCEMENT

MODERN-DAY DELTAS

Marine deltas are among the most dynamic and recent of the Earth's landforms to develop. They also are among the most densely populated and intensively utilized environments on Earth. In addition, they are subject to significant changes due to natural and human activities. Thus, it is not surprising that, today, they are of major concern to both natural and social scientists, engineers and those involved in coastal management.

During the last glacial maximum, when sea level was *c.* 120 m below the level of today, the lower courses of river valleys were entrenched. As sea level rose, sea water penetrated the lower courses of rivers resulting in deposition of river-borne sediments. Eventually, and especially since sea level reached a general still-stand position approximately 4000 to 7000 years ago, many of those valleys filled and deltas formed. Although some of the valleys are still in the filling stage, others, such as the major deltas of the Ganges-Brahmaputra, Lena, Mississippi, Nile and Po, have penetrated into a bordering sea.



The Balize Delta, which began to form about 600–800 years ago, is the most recent extension of the Mississippi River into the Gulf of Mexico. River discharge is evidenced by the turbid plume that is present in the Gulf south of the delta. Image provided courtesy Harry Roberts

The term 'delta' stems from at least the time of Herodotus (484–425 BC) when it was used to describe the area created by the Nile River where it enters the Mediterranean Sea, because it is shaped like the Greek letter 'delta'. Today, the term, in its broadest sense refers to both the subaerial and subaqueous deposits found at the mouth of rivers. Deltas are highly varied in size, shape, composition and structure and are subjected to considerable variations in tides, waves, currents, river discharge, sediment composition and load, biota and receiving basin morphology.

Several thousand years ago, deltas began to serve as sites for fishing, navigation, settlement and agriculture. Such endeavours had direct impacts on deltaic environments, impacts that were intensified by over-grazing and deforestation within drainage basins and by reclamation. It was not until recently, however, that industrialization, hydrocarbon exploitation, river damming, dredging and levee construction brought about major changes in deltaic processes including subsidence, depositional and erosional rates, and biotic productivity.

Accompanying these increasing demands is an increasing awareness that deltaic environments, with their numerous swamps, marshes, flats, barriers, lagoons, lakes and estuaries, are not the 'worthless regions' depicted as recently as two decades ago but have, in contrast, an intrinsic value far greater than formerly realized.

Present-day marine deltas, especially those with dense populations, are subjects of increasingly intense study and today are more comprehensively understood than ever before. In the past, a number of conferences focusing on deltas have been convened but most of them have been restricted regionally or topically. For example, the UNESCO-sponsored 'Hydrology of Deltas' in Bucharest, Romania, in 1968 emphasized hydrology, whereas the one held in Dacca four years earlier was devoted to tropical deltas.

A broader-based, and therefore highly unique, symposium will be held in New Orleans, USA from 23–29 August 1998 with the purpose of informing scientists, engineers and decision-makers about available information and concepts needed for working and living in deltas. Experts in the physical, biological, engineering and socioeconomic disciplines will share their experiences and observations on the current state of deltas and assess how this information can help meet the demands of the future. New Orleans, which owes its existence to the Mississippi River delta, offers a logical setting for the symposium.

Further information can be obtained by contacting jdonley@unix1.sncc.lsu.edu and/or checking the Symposium's URL at <http://opal.ga.lsu.edu/deltas98>.

H. JESSE WALKER
LSU, Baton Rouge, LA, USA